



Building Activities

Diane Demarest
Twiga Foundation

Agenda Today

- Keva properties
- Activities you can use with students
- Math Research & your role in block play
- Familiar with blocks and activities so you're ready to apply
- Have Fun!!

Warm UP ☺

Block Activity

- You each have planks
- Working with your team
- Together as you build and handle your blocks, describe your blocks with as many math and science words, concepts, principles as you can think of
- Record responses on the grid provided
- You have 5 minutes
- Ready, set, go!

Emergent Math & Science Words

- | | | |
|---------------|----------------|---------------------------|
| 1. Above | 19. Divide | 37. Many |
| 2. Add | 20. End | 38. Measure |
| 3. All | 21. Equal | 39. Minus |
| 4. Analyze | 22. Estimate | 40. model |
| 5. Balance | 23. Far | 41. Near |
| 6. Below | 24. Few | 42. Next to |
| 7. Black | 25. Flat | 43. None |
| 8. Blue | 26. Flip | 44. Numbers |
| 9. Bottom | 27. Gravity | 45. Numerals |
| 10. Colors | 28. Green | 46. 1 to 1 correspondence |
| 11. Compare | 29. Group | 47. Orange |
| 12. Compute | 30. Half | 48. Order |
| 13. Corners | 31. Horizontal | 49. Parts |
| 14. Count | 32. how many | 50. Pattern |
| 15. Cubes | 33. Left | 51. Perspective |
| 16. Data | 34. Length | 52. Plus |
| 17. Different | 35. Line | 53. Properties |
| 18. Direction | 36. Long | 54. Quantity |

Emergent Math & Science Words

55. Quarter
56. Rectangle
57. Red
58. Relationships
59. Represent
60. Right
61. Same
62. Sentence
63. Set
64. Short
65. Side by side
66. Side
67. Smooth
68. Sort
69. Square
70. Stack

71. Subtract
72. Symbol
73. Symmetry
74. Third
75. Top
76. Triangle
77. Unequal
78. Vertical
79. 2 dimensional
80. Weight
81. Whole
82. Wooden
83. Yellow
84. Slope
85. Angle
86. Fall
87. Hard

88. Round
89. Row
90. Straight
91. Space
92. Even
93. Predict
94. polygon
95. hexagon
96. pentagon
97. octagon
98. rhombus
99. First, Second
100. Value

What do we know about math & block play?

- Children are more capable of understanding math concepts than we often give them credit for.
- Early math competence predicts later math achievement. (Duncan)
- Block play increases in complexity with time, experience and opportunity. (Phelps, et al)
- Block play at age 3 is related to complex math abilities in 7th – 12th grades. (Wolfgang, et al).

Keva Properties

- Building Position: It's best to build from a squatting position. This allows children to easily get several views of their building. It also keeps children from accidentally knocking over their building with their knees when they get up from kneeling or sitting on the floor.
- It's best to build on the floor rather than on a table, which can be easily bumped. You can create an even surface on a carpeted or textured floor by laying Keva® down to create a platform to build on.
- Keva® has three dimensions: the flat side, the end and the edge



Keva Talk



Flat	On edge	Leaning
Upright	Parallel	Perpendicular
Stack	Adjacent	On end
Angled	Touching	Spaced
Even	Length	Right angle

What is the adults' role in block play?

- Adults make a difference in a child's math abilities, attitudes and accomplishments.
- Provide opportunity
- Ample space and blocks
- Protected so it won't be easily disturbed
- Record accomplishments (how?)
- Join in, model, describe, affirm
- Interpreters of reality

Jacobs & Bleeker, 2004

Additional Activities:

- **Young builders**

- May build in parallel play rather than cooperatively
- Lower tolerance for frustration
- Need prompts or challenges (can you build a tower as tall as yourself?)

- **Older builders**

- Expect they will need more blocks
- Expect them to be able to work on a team and cooperate and assign roles
- Collaborative challenges are fun for them.

- **Check your handbook for more activities**

End with a building challenge:

- Each team may use all their blocks
- Must start on a platform of 4 blocks placed on their flat side touching each other
- Build as high and wide as you can without any other blocks touching the floor.
- You have 15 minutes to plan and build.
- Go!



Questions?

Ideas?

